AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A magnetoelectric element including at least one set of alternative piezoelectric layer and magnetostrictive composite layer, wherein:

the magnetostrictive composite layer includes at least one magnetostrictive material provided in particle form and being dispersed in first concentrated zones within a first continuous polymer matrix, wherein all of said concentrated zones of particulate magnetostrictive material are orientated and aligned along a first direction in a manner so as to provide a preferred magnetization axis in said first direction.

2. (Original) The magnetoelectric element of Claim 1, wherein the magnetostrictive material is a rare-earth-based alloy.

3. (Original) The magnetoelectric element of Claim 2, wherein the rare-earth-based alloy is selected from the group consisting of terbium-dysprosium-iron alloy (Terfenol-D), gallium-iron alloy (Gafenol) and samarium-dysprosium-iron alloy (Samfenol-D).

4. (Original) The magnetoelectric element of Claim 1, wherein the first polymer matrix is made of a first polymer selected from the group consisting of thermosetting polymer and thermoplastic polymer.

5. (Original) The magnetoelectric element of Claim 1, wherein the piezoelectric layer is selected from the group consisting of piezoelectric polymer and piezoelectric composite.

6. (Original) The magnetoelectric element of Claim 5, wherein the piezoelectric polymer is selected from the group consisting of polyvinylidene fluoride (PVDF) polymer, and polyvinylidene fluoride-trifluoroethylene [P(VDF-TrFE)] copolymers.

7. (Original) The magnetoelectric element of Claim 5, wherein the piezoelectric composite includes at least one piezoelectric material dispersed in second concentrated zones within a second polymer matrix, wherein all of said concentrated zones are orientated along a second direction.

8. (Original) The magnetoelectric element of Claim 7, wherein the piezoelectric material is selected from the group consisting of barium titanate (BaTiO3), lead zirconate titanate (PZT), lead magnesium niobate-lead titanate (PMN-PT) and lead zirconate niobate-lead titanate (PZN-PT).

9. (Original) The magnetoelectric element of Claim 7, wherein the second polymer matrix is made of a second polymer selected from the group consisting of thermosetting polymer, thermoplastic polymer, polyvinylidene fluoride (PVDF) polymer and polyvinylidene fluoride-trifluoroethylene [P(VDF-TrFE)] copolymer.

10. (Previously Presented) A magnetoelectric device including:

at least one magnetoelectric element according to Claim 1; and

a least one field generator for generating a magnetic field such that the magnetoelectric element is positioned in the magnetic field.

11. (Original) The magnetoelectric device of Claim 10, wherein the field generator is an invariable field generator.

12. (Original) The magnetoelectric device of Claim 11 further including a second variable field generator to generate a variable magnetic control field.

13. (Original) The magnetoelectric device of Claim 10, wherein the field generator is a variable field generator to generate a variable magnetic control field.

Claims 14-16. (Canceled)